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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,108	06/25/2003	Kazushi Ogawa	075834.00420	4208

33448 7590 08/08/2006

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EXAMINER	
RENNER, CRAIG A	

ART UNIT	PAPER NUMBER
2627	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/606,108	OGAWA ET AL.	
	Examiner	Art Unit	
	Craig A. Renner	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *06 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5,7,9,11,19 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5,7,9,11,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following is suggested:

--MAGNETIC HEAD WITH AUXILIARY MEMBER AND LEADING MAGNETIC CORE WIDTH EQUAL TO OR SMALLER THAN THAT OF TRAILING MAGNETIC CORE--.

2. The disclosure is objected to because of the following informalities:

a. In lines 24-25 of claim 1 and line 22 of claim 7, each instance of "direction on the" should be corrected to read --direction of the--.

b. In line 1 of claim 20, "The magnetic head assembly" should be changed to --The magnetic tape drive unit-- in order to more clearly refer back to that set forth in line 1 of independent claim 7.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. In lines 2-3 of claim 19, it is indefinite as to whether the "first auxiliary member" and the "second auxiliary member" are the same as the "at least one auxiliary member" and the "auxiliary member" set forth in lines 5 and 23 of independent claim 1, or if the "first auxiliary member" and the "second auxiliary member" are in addition to the "at least one auxiliary member" and the "auxiliary member" set forth in lines 5 and 23 of independent claim 1.

b. In line 3 of claim 19, it is indefinite as to whether "said trailing side" refers to that set forth in line 3 of independent claim 1, or that set forth in line 24 of independent claim 1.

c. In lines 2-3 of claim 20, it is indefinite as to whether the "first auxiliary member" and the "second auxiliary member" are the same as the "at least one auxiliary member" and the "auxiliary member" set forth in lines 8 and 21 of independent claim 7, or if the "first auxiliary member" and the "second auxiliary member" are in addition to the "at least one auxiliary member" and the "auxiliary member" set forth in lines 8 and 21 of independent claim 7.

d. In line 3 of claim 20, it is indefinite as to whether "said trailing side" refers to that set forth in line 7 of independent claim 7, or that set forth in line 22 of independent claim 7.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 7, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Ozue et al. (US 6,801,379).

Ozue teaches a magnetic head assembly (1) comprising a magnetic recording head (includes 12-17, for instance), having a leading side and a trailing side relative to the traveling direction of a magnetic recording medium (22), and at least one auxiliary member (one of 4 and 5, for instance) adhered to either the leading side or the trailing side of the magnetic recording head (as shown in FIG. 4, for instance), the magnetic recording head mounted in a helical scan drive (as shown in FIG. 8, for instance) and including a substrate (7), a first magnetic core (one of 13 and 14) formed above the substrate (as shown in FIG. 4, for instance) and having a front end portion (as shown in FIG. 4, for instance), a second magnetic core (the other of 13 and 14) formed above the substrate (as shown in FIG. 4, for instance) and having a front end portion and a back end portion (as shown in FIG. 4, for instance), the back end portion being connected to

the first magnetic core (as shown in FIG. 4, for instance), a magnetic gap (16) of predetermined thickness provided between the front end portion of the first magnetic core and the front end portion of the second magnetic core (as shown in FIG. 4, for instance), a coil (17) disposed between the first magnetic core and the second magnetic core (as shown in FIG. 4, for instance) for developing a magnetic flux between the front end portions of the first and second magnetic cores, wherein a width of the second magnetic core at the front end portion thereof is equal to or smaller than that a width of the first magnetic core (as shown in FIG. 5, for instance, i.e., equal to), and wherein the second magnetic core is positioned on the leading side of the magnetic recording head (as shown in FIG. 5, for instance) and wherein an auxiliary member (the other of 4 and 5) is adhered to the magnetic recording head at the leading side and/or a trailing side in the traveling direction of the magnetic recording medium (as shown in FIG. 4, for instance) [as per claim 1]; wherein a first auxiliary member (one of 4 and 5) is adhered to the leading side of the magnetic recording head and a second auxiliary member (the other of 4 and 5) is adhered to the trailing side of the magnetic recording head [as per claim 19]; and wherein the magnetic head assembly is a component of a magnetic tape drive unit comprising tape driving means (lines 45-55 in column 5, for instance) [as per claims 7 and 20].

7. Claims 1, 7, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuura et al. (JP 06-012622).

Matsuura teaches a magnetic head assembly (FIG. 1, for instance) comprising a magnetic recording head (includes 2-4, for instance), having a leading side and a trailing side relative to the traveling direction of a magnetic recording medium (6), and at least one auxiliary member (one of elements 11, for instance) adhered to either the leading side or the trailing side of the magnetic recording head (as shown in FIG. 7, for instance), the magnetic recording head mounted in a helical scan drive (as shown in FIG. 8, for instance) and including a substrate (left-most 5 or lower-most 8, for instance), a first magnetic core (one of elements 2, for instance) formed above the substrate (as shown in FIG. 1, for instance, i.e., depending upon viewer perspective) and having a front end portion (as shown in FIG. 1, for instance), a second magnetic core (the other of elements 2, for instance) formed above the substrate (as shown in FIG. 1, for instance, i.e., depending upon viewer perspective) and having a front end portion and a back end portion (as shown in FIG. 1, for instance), the back end portion being connected to the first magnetic core (as shown in FIG. 1, for instance), a magnetic gap (4) of predetermined thickness provided between the front end portion of the first magnetic core and the front end portion of the second magnetic core (as shown in FIG. 1, for instance), a coil (3) disposed between the first magnetic core and the second magnetic core (as shown in FIG. 1, for instance) for developing a magnetic flux between the front end portions of the first and second magnetic cores, wherein a width of the second magnetic core at the front end portion thereof is equal to or smaller than that a width of the first magnetic core (as shown in FIG. 6, for instance, i.e., equal to), and wherein the second magnetic core is positioned on the leading side of the magnetic

recording head (as shown in FIGS. 6-7, for instance) and wherein an auxiliary member (the other of elements 11, for instance) is adhered to the magnetic recording head at the leading side and/or a trailing side in the traveling direction of the magnetic recording medium (as shown in FIG. 7, for instance) [as per claim 1]; wherein a first auxiliary member (one of elements 11, for instance) is adhered to the leading side of the magnetic recording head and a second auxiliary member (the other of elements 11, for instance) is adhered to the trailing side of the magnetic recording head [as per claim 19]; and wherein the magnetic head assembly is a component of a magnetic tape drive unit comprising tape driving means (as shown in FIG. 8, for instance) [as per claims 7 and 20].

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 3, 5, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuura et al. (JP 06-012622) in view of Chen (US 5,812,350).

Matsuura teaches the magnetic head assembly as detailed in paragraph 7, supra. Matsuura, however, remains silent as to "wherein a saturation magnetic flux density of a material of said first magnetic core is chosen to be larger than that of said

second magnetic core" as per claims 3 and 9; and "wherein said first magnetic core is made of two or more kinds of stacked films and a saturation magnetic flux density of a material of at least one film of the stacked films closest to said magnetic gap is chosen to be larger than that of said second magnetic core" as per claims 5 and 11.

Chen teaches a saturation magnetic flux density of a material of a first magnetic core (PT) being chosen to be larger than that of a second magnetic core (P1, as shown in FIG. 10, for instance, i.e., $Ni_{45}Fe_{55}$ has a larger saturation magnetic flux density than $Ni_{80}Fe_{20}$), and a first magnetic core (P2) being made of two or more kinds of stacked films (as shown in FIG. 9, for instance, i.e., $Ni_{45}Fe_{55}$ and $Ni_{80}Fe_{20}$) and a saturation magnetic flux density of a material of at least one film of the stacked films closest to a magnetic gap (G3) is chosen to be larger than that of a second magnetic core (P1, as shown in FIG. 9, for instance, i.e., $Ni_{45}Fe_{55}$ has a larger saturation magnetic flux density than $Ni_{80}Fe_{20}$) in the same field of endeavor for the purpose of minimizing magnetostriction. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have had a saturation magnetic flux density of a material of the first magnetic core of Matsuura be chosen to be larger than that of the second magnetic core as taught by Chen, and to have had the first magnetic core of Matsuura be made of two or more kinds of stacked films and a saturation magnetic flux density of a material of at least one film of the stacked films closest to the magnetic gap be chosen to be larger than that of the second magnetic core as taught by Chen. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have had have had a saturation magnetic flux density of a material of the first magnetic core of Matsuura be chosen to be larger than that of the second magnetic core as taught by Chen, and to have had the first magnetic core of Matsuura be made of two or more kinds of stacked films and a saturation magnetic flux density of a material of at least one film of the stacked films closest to the magnetic gap be chosen to be larger than that of the second magnetic core as taught by Chen since such minimizes magnetostriction.

Response to Arguments

10. Applicant's arguments filed 6 June 2006 have been fully considered but they are not persuasive.

The applicant argues that the prior art relied upon by the examiner does not teach "an auxiliary member that is adhered to the magnetic recording head at the leading side and/or a trailing side in the traveling direction on the magnetic recording medium." This argument, however, is not found to be persuasive as Ozue et al. (US 6,801,379) does teach an auxiliary member (one of 4 and 5) that is adhered to a magnetic recording head (includes 12-17, for instance) at a leading side and/or a trailing side in the traveling direction on a magnetic recording medium (22) (as shown in FIG. 4, for instance), and Matsuura et al. (JP 06-012622) does teach an auxiliary member (one of elements 11, for instance) that is adhered to a magnetic recording head (includes 2-4, for instance) at a leading side and/or a trailing side in the traveling direction on a magnetic recording medium (6) (as shown in FIG. 7, for instance).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig A. Renner whose telephone number is (571) 272-7580. The examiner can normally be reached on Monday-Tuesday & Thursday-Friday 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Craig A. Renner
Primary Examiner
Art Unit 2627

CAR